



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: William C. Bullard

Serial No. 09/276,277

Filed: 03/25/1999

For: **FLOW PROBE CONNECTIVITY DETERMINATION**

Examiner: Rudy, Andrew

Art Unit: 3627

Mail Stop Appeal Brief - Patents

Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

Sir:

The present **APPEAL BRIEF** is refiled in triplicate pursuant to 37 C.F.R. § 1.192.

Applicant previously paid the filing fee of \$330.00 as required by 37 C.F.R. § 1.17(c). If any additional fees are required in association with this appeal brief, the Director is hereby authorized to charge them to Deposit Account 50-1732, and consider this a petition therefor.

REVISED APPEAL BRIEF

(1) REAL PARTY IN INTEREST

The present application is owned by Nortel Networks Limited of 2351 Boulevard Alfred-Nobel, St. Laurent, Quebec Canada H4S 2A9, which is wholly owned by Nortel Networks Corporation, a Canadian corporation.

(2) RELATED APPEALS AND INTERFERENCES

The present appeal is loosely related to appeals in U.S. Patent Application Serial Numbers 09/276,694; 09/276,307; and 09/276,308. Appeal briefs were filed in these cases on February 9, February 11, and February 11, 2004 respectively. The present appeal is also loosely related to an appeal in U.S. Patent Application Serial Number 09/276,056, for which an appeal brief was filed on March 23, 2004.

The present appeal is also loosely related to prior appeals in related cases 09/276,307 and 09/276,308, for which revised appeal briefs were previously filed on January 30, 2003; and 09/276,207, for which an appeal brief was previously filed on August 30, 2002. While these

prior appeals have been remanded or otherwise resolved, Appellant notes them in the interests of full disclosure.

(3) STATUS OF CLAIMS

Claims 2-15, 19-22, 24, and 26-28 stand rejected with the rejection made final on January 20, 2004.

Claims 2-15, 19-22, 24, and 26-28 are pending and are the subject of this appeal.

(4) STATUS OF AMENDMENTS

All amendments have been entered to the best of Appellant's knowledge.

(5) SUMMARY OF THE INVENTION

The present invention is one component of a multi-component software product designed to facilitate billing in a communication network. The specification of the present application has numerous details regarding the environment and other components of the software product. These details form the basis of several related applications, including those referenced above in the Related Appeals section. The invention claimed in the present application is described in depth at page 49, line 20-page 60, line 17. In particular, the present invention is designed to detect if a communication connection has failed so that the customer may be billed appropriately. To effectuate this, a flow probe (12) sits in a network path (606) or may be associated with a network element (608). Upon occasion, a request for a connection may be rejected (see, for example, the events described at page 52, lines 1-5). When such a rejection occurs, a message is created in a first protocol type for providing error reporting. In an exemplary embodiment, the first protocol type is the Internet Control Message Protocol (ICMP) (see page 2, line 5). The message is conveyed back to the originator of the request via an error report packet 610. Within the error report packet 610 is the ICMP data 626, within which is an embedded Internet Protocol (IP) packet 634. The embedded IP packet 634 is associated with the communications flow which gave rise to the error and, in an exemplary embodiment, is in the Transmission Control Protocol (TCP) (see page 2, line 6).

The error report packet 610 will pass through the flow probe 12, which will capture the packet and examine (or process) the packet (see Fig. 27 and page 56, lines 7-10) to determine the contents thereof, and particularly determine if there is an error report according to the ICMP (see

page 54, lines 2-10). During the processing of the packet, the flow probe then correlates (or maps) the flow associated with the embedded packet to a flow that the flow probe was monitoring and had stored in a local store (see page 54, lines 2-10 and page 56, line 26-page 57, line 10). This correlation is done through evaluation of the header information of the packet. The header information includes a flow key (see page 57, lines 5-11). The processing further includes matching the flow key to the flow key of the stored flow (see page 57, lines 12-21), and using the flow to update metrics and state information of the stored flow (see page 57, lines 15-16). If the flow cannot be matched to an existing flow, then the probe constructs and stores a new flow and completes the process (see page 57, lines 12-15).

This effectively associates the error with the flow in the network accounting records of the flow probe, and thus allows well-informed accounting information to be passed to the accounting application so that the accounting application receives updated metrics and state information about the flows (see page 58, lines 20-21). For example, if the state information changes, the accounting information may indicate that the transaction has stopped (see page 53, lines 6-21).

(6) ISSUES

Whether claims 2-15, 19-22, 24, and 26-28 are obvious under 35 U.S.C. § 103 as being unpatentable over Jorgensen.

(7) GROUPING OF CLAIMS

Claims 2-15, 19-22, 24, and 26-29 stand or fall together for the purposes of this appeal.

(8) ARGUMENT

A. Introduction

The present application was filed March 25, 1999, before the filing date of the Jorgensen reference, but after the provisional application to which Jorgensen claims priority. However, an examination of the provisional application reveals that the provisional application does not support the portions of Jorgensen that have been cited against the pending claims, and thus, the rejection is not properly supported by a reference that qualifies, in relevant part, as prior art. Since the rejection is not properly supported, the rejection is improper, and the claims are

allowable. Appellant requests that the Board reverse the Examiner and instruct the Examiner to allow the case.

B. Summary of the Reference

U.S. Patent No. 6,452,915 to Jorgensen was filed July 9, 1999, claiming the benefit from U.S. Provisional Patent Application No. 60/092,452, filed July 10, 1998. For the sake of differentiating between the two disclosures, Appellant refers to the issued patent as “Jorgensen,” and refers to the earlier filed provisional application as the “provisional application.” Because only the disclosure of the provisional application predates the filing date of the present application, only the disclosure of the provisional application is relevant.

The provisional application discloses a wireless broadband point to multipoint system with a framework designed to enable a certain quality of service. Customers have a service agreement with particular quality of service terms such as a minimum delay and a maximum bandwidth. During operation, the system identifies flows by examining packet headers. These flows are mapped into classes and placed into queues based on the classes. The transmission of packets in a particular class is authorized based on meeting the quality of service requirements for the combination of classes.

Two forms of error detection and correction are contemplated in the provisional application. On page 5, line 5, a forward error correction function is described. On page 8, lines 5-7, a CRC checksum for error detection is described. Appellant’s review of the provisional application reveals no other discussion of error detection or correction.

C. Standard for Obviousness

Section 103(a) of the Patent Act provides the statutory basis for an obviousness rejection and reads as follows:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time of invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35 U.S.C. § 103. Courts have interpreted 35 U.S.C. § 103(a) as a question of law based on underlying facts. As the Federal Circuit stated:

Obviousness is ultimately a determination of law based on underlying determinations of fact. These underlying determinations include: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) the extent of any proffered objective indicia of nonobviousness.

Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH, 139 F.3d 877, 881 (Fed. Cir. 1998) (internal citations omitted).

The first inquiry in this case is the scope and content of the prior art. That is, the Patent Office must show that the reference or combination of references teaches or suggests every element recited in the claims to establish *prima facie* obviousness. *In re Royka*, 490 F.2d 981 (C.C.P.A. 1974); MPEP § 2143.03. An element may be suggested explicitly or implicitly. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). The Patent Office must provide particular findings with regard to a suggested showing. Broad conclusory statements standing alone are not sufficient. *Id.* “Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.” *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). “If the PTO fails to meet this burden, then the Appellant is entitled to the patent.” *In re Glaug*, 283 F.3d 1335, 1338 (Fed. Cir. 2002).

Appellant further notes that the Federal Circuit has laid the initial burden on the Patent Office to establish *prima facie* obviousness. As the Federal Circuit has indicated the “PTO bears the burden of establishing a case of *prima facie* obviousness.” *In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993); see also *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993); *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). MPEP § 2142 provides further guidance, indicating that the Examiner bears the burden of factually supporting any *prima facie* conclusion of obviousness.

A reference is available under 35 U.S.C. § 103 if the reference is available under 35 U.S.C. § 102. The MPEP provides guidance as to determining whether a reference is available under 35 U.S.C. § 102(e). MPEP § 706.02(f)(1)(I). This section instructs the Examiner that the

102(e) date of a reference that did not result from, nor claimed benefit of, an international application is its earliest effective U.S. filing date, taking into consideration any proper benefit claims to prior U.S. applications under 35 U.S.C. § 119(e) or 120 *if the prior application(s) properly supports the subject matter used to make the rejection.*”

MPEP § 706.02(f)(1)(I) (emphasis added and citation omitted). In Example 2, the MPEP further indicates that an application that claims the benefit of a prior provisional application “would be

accorded the earlier filing date as its prior art date under 35 U.S.C. § 102(e), *assuming the earlier-filed application has proper support for the subject matter. . . .*” *Id* (emphasis added). Since the reference only gets the benefit of the earlier filing date as its prior art date if the provisional application supports the subject matter, then if the provisional application does not support the subject matter, the patent is not afforded the provisional application’s filing date as its prior art date.

D. Jorgensen is not, in relevant part, prior art

1. Background

The present issue boils down to whether or not the Patent Office has met its burden in establishing obviousness for the claims at issue. When the Patent Office initially cited Jorgensen in the Office Action of January 23, 2003, Appellant was not in possession of the provisional application and was informed by the Patent Office that it was unavailable. In the Response filed March 28, 2003, Appellant requested a copy of the provisional application and further pointed out that the burden was on the Patent Office to establish that Jorgensen could rely on the earlier filing date of the provisional application. The Patent Office, a year later, rejected this position and stated that it was incumbent upon Appellant to contest the material or lack thereof with regard to the provisional application. In conjunction with providing the provisional application, Appellant provided an analysis as to the contents thereof based on Appellant’s reading. Specifically, on page 3 of the Response filed March 19, 2004, Appellant argued that the drawings and elements referenced by the Patent Office in the Office Actions of January 23, 2003 and January 20, 2004 were not present in the provisional application, nor was there any clear indication of what text or images within the provisional application corresponded to the elements and drawings to which the Patent Office had cited. Appellant went so far as to request explicitly that the Patent Office identify with appropriate citation to page and line number where in the provisional application the Patent Office found support for the rejection (see Response filed March 19, 2004, page 3, lines 22-25). The Patent Office’s reply in the Advisory Action was that the “provisional application is deemed to possess enough data, e.g., Sections 1-17, from which the US 6,452,915 may claim priority.” (Advisory Action mailed April 1, 2004, continuation page, lines 1-2). This generalized citation to the entirety of the provisional application was made even though Appellant specifically asked for a more detailed explanation of where the provisional application disclosed the elements to support the priority claim.

2. Jorgensen Does Not Automatically Get the Earlier § 102(e) Date

The MPEP indicates that the priority date of a patent is the filing date of an earlier provisional application only if the prior provisional application properly supports the subject matter used to make the rejection. MPEP § 706.02(f)(1)(I). Thus, while it is conceivably possible that a patent may qualify for a claim of priority to a provisional application for some purposes, it is also possible that the same patent may not qualify for an earlier § 102(e) date in a rejection because the earlier provisional application does not properly support the subject matter used to make the rejection.

3. The Provisional Application Does Not Support the Subject Matter Used to Make the Rejection

In the Office Actions of January 23, 2003 and January 20, 2004, the Patent Office relies on Figs. 5b, 5c, and 7 of Jorgensen, as well as Jorgensen elements 408 (network layer), 429 (network layer), 410 (transmission control protocol), and 104 (processor and memory). A review of the provisional application reveals that there is no Figure within the provisional application that corresponds to Jorgensen Figures 5b, 5c, or 7. The only images appearing in the provisional application are found at provisional application pp. 1, 6, and 7 and do not resemble Jorgensen Figures 5b, 5c, or 7. Appellant has reviewed the provisional application and finds no disclosure that teaches or suggests the subject matter of Jorgensen Figures 5b, 5c, and 7. It is not Appellant's job to create the rejection and refute it. The burden of supporting the rejection rests on the Patent Office. Appellant has specifically asked for clarification as to what elements within the provisional support the rejection and received non-responsive text from the Patent Office. If the Patent Office chooses to clarify where the provisional application teaches the subject matter of Figures 5b, 5c, and 7 in the Answer, then Appellant reserves the right to address this in the Reply Brief. Absent such clarification however, it is readily apparent that the provisional application does not teach or suggest the subject matter of Jorgensen Figures 5b, 5c, and 7.

Furthermore, Appellant's study of the provisional application reveals no teaching or suggestion within the provisional relating to a network layer corresponding to network layer 408, 429 that uses an internet control message protocol and transmission control protocol (corresponding to element 410) to perform error control functions where data is carried. The only references to error detection and error correction in the provisional application are noted

above with respect to the CRC checksum and the forward error correction functions. The CRC checksum and the forward error correction do not correspond to the portions of Jorgensen used to make the rejection. If the Patent Office chooses to clarify where the provisional application teaches the subject matter of the recited elements in the Answer, then Appellant reserves the right to address this in the Reply Brief. Absent such clarification, it is readily apparent that the provisional application does not teach or suggest the subject matter of a network layer corresponding to network layer 408, 429 that uses an internet control message protocol and transmission control protocol (corresponding to element 410) to perform error control functions where data is carried.

In short, since the provisional application does not teach or suggest the subject matter of Jorgensen Figures 5b, 5c, and 7, nor the elements cited by the Patent Office, then the provisional application does not provide support for the subject matter used to make the rejection and Jorgensen is not entitled to the earlier date of the provisional application. Since Jorgensen is not entitled to the earlier date of the provisional application, Jorgensen does not qualify as prior art and cannot be cited against the pending claims. Appellant requests that the Board reverse the Examiner on this basis and instruct the Examiner to allow the claims.

E. Conclusion

The Patent Office has not met its burden in proving that the elements of the claim are supported by the disclosure of the provisional application. Despite Appellant's request for clarification as to where the provisional application supports the subject matter used to make the rejection, the Patent Office has provided a terse, unhelpful analysis. Based on the record and the explanations provided to date by the Patent Office, this rejection is not well supported, and Appellant requests that the Board reverse the Examiner and instruct the Examiner to allow the claims.

Respectfully submitted,

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(9) APPENDIX

1. (Canceled).
2. A method of analyzing a flow for an accounting application, comprising:
 - capturing an Internet Protocol (IP) packet from a network segment to form a captured IP packet;
 - determining if the captured IP packet includes a message of a first protocol type for providing error reporting, the message having an IP packet that triggered an error event embedded within thereby forming an embedded IP packet, the embedded IP packet being of a second protocol type and having a flow associated therewith;
 - correlating the flow associated with the embedded IP packet to a stored parent flow of a given state, thereby associating the error event with the given state of the stored parent flow; and
 - using results of the correlating to provide well-informed accounting information related to the flow to the accounting application.
3. The method of claim 2, wherein the first protocol type is the Internet Control Message Protocol.
4. The method of claim 2, wherein the second protocol type is the Transmission Control Protocol.
5. The method of claim 2, wherein the first protocol type is the Internet Control Message Protocol and the second protocol type is the Transmission Control Protocol.
8. The method of claim 6, wherein using comprises:
 - reporting a transaction stop indication in response to the change of the given flow state to the rejected state.
9. The method of claim 2, wherein correlating further comprises:
 - processing the captured Internet Protocol (IP) packet.

10. The method of claim 9, wherein the processing comprises:
using header information to map the flow to a flow stored in a local store.
11. The method of claim 10, wherein the header information includes a flow key.
12. The method of claim 11, wherein the local store stores for the stored flow, flow state information including a flow key associated with metrics and state information, and wherein processing further comprises:
matching the flow key to the flow key of the stored flow.
13. The method of claim 12, wherein processing further comprises:
using the flow to update the metrics and the state information of the stored flow.
14. The method of claim 13, wherein processing further comprises:
providing an accounting record to the accounting application, the accounting record reflecting having updated the metrics and the state information of the stored flow.
15. The method of claim 11, wherein processing further comprises:
storing flow state information in association with the flow key for the flow in the local store if the header information cannot be used to map the flow to a stored flow.
- 16-18. (Canceled).
19. A computer program product residing on a computer-readable medium for analyzing a flow for an accounting application, comprising instructions to cause a computer to:
capture an Internet Protocol (IP) packet from a network segment to form a captured IP packet;
determine if the captured IP packet includes a message of a first protocol type for providing error reporting, the message having an embedded IP packet that triggered an error event, the embedded IP packet being of a second protocol type and having a flow associated therewith;

correlate the flow associated with the embedded IP packet to a stored parent flow of a given state to associate the error event with the given state of the stored parent flow; and
use results of the correlating to provide well-informed accounting information related to the flow to the accounting application.

20. The computer program product of claim 19, wherein the first protocol is the Internet Control Message.

21. The method of claim 19, wherein the second protocol type is the Transmission Control Protocol.

22. The method of claim 19, wherein the first protocol type is the Internet Control Message Protocol and the second protocol type is the Transmission Control Protocol.

23. (Canceled).

24. A system for flow of network packet data, comprising:
a processor;
a memory storing a computer program product residing on a computer-readable medium for analyzing a flow for an accounting application, comprising instructions to cause a computer to:

capture an Internet Protocol (IP) packet from a network segment;

determine if the captured IP packet includes a message of a first protocol type for providing error reporting, the message having an embedded IP packet that triggered an error event, the embedded IP packet being of a second protocol type and having a flow associated therewith;

correlate the flow associated with the embedded IP packet to a stored parent flow of a given state to associate the error event with the given state of the stored parent flow; and

use results of the correlating to provide well-informed accounting information related to the flow to the accounting application.

25. (Canceled).

26. The computer program product of claim 24 wherein the first protocol is the Internet Control Message.

27. The method of claim 24 wherein the second protocol type is the Transmission Control Protocol.

28. The method of claim 24 wherein the first protocol type is the Internet Control Message Protocol and the second protocol type is the Transmission Control Protocol.